spicules are composed of numerous concentric coats; and in one figure he represents the fracture as produced in the centre, showing about six thick layers, each shorter than the preceding; but all the other breaks are represented short, straight or oblique, like a broken glass rod. The short reflexed hooks on the surfaces of the elongated spicules at the root of the sponge are formed by folds of the siliceous lamina.

He describes the network as formed of more or less elongated spicules united by a siliceous cement, which, like the spicules, is deposited in laminæ.

Dr. Claus's plates show that the spicules of this sponge are formed of concentric laminæ as are the spicules of *Hyalonema*—which, I believe, has not before been observed; and at the same time he shows that the spines on the surface of the spicules are formed in a very different manner from the ring of spines on the spicules of that genus.—J. E. Gray.

### *Sea-Pools in the Friendly Islands.*
By Dr. Harvey.

"I walked out on the coral-reef opposite the landing-place [at Tongataboo]. It fringes the whole north side of the island, in some places extending a mile or more from the beach. A great part of the surface was worn and dead, but in the pools the coral was alive. Near the margin of the reefs these pools were numerous and deep, and in them many beautiful corals were growing luxuriantly. They were various—some branching or leafy, others knobby or massive, some bushy, some tree-like, or saucer-shaped or huge disks, some sessile, others on stems. The colours varied from white to brown, purple, green, yellow, flesh-colour, and dull red; and many reflected rainbow-tints changing with the angle, particularly at the tips of the branches. The water was clear as air; and through it multitudes of little sapphire fishes (Coloto) darted among the coral-branches. Seaweeds were very few, and almost all of the green order, among which were *Halimedea* and *Bryopsis*. Starfishes of the long-armed class, *Ophiura* and *Ophiocoma*, were abundant; and a large brown feather-star was frequent under stones. Great, black, ugly sea-cucumbers (*Holothuriæ* or Trepang) were crawling everywhere; I caught at one, which immediately threw out multitudes of long, blue, shiny, slimy threads, that coiled round my fingers: I dropped the brute, but had some difficulty in getting my hand free; it did not sting me, however. I picked up a *Cidaris* and an *Echinus* (Urchin), and saw another species of the latter, which I did not venture to touch, remembering how I had been stung by one (I think the same species) at Key West. It has long, slender, and very brittle spines, covered with highly poisonous slime. Near the edge of the reef Nullipores abound, in places left bare at low water. I noticed that some of the living corals were bare also; but probably they did not long remain so, for it was a low spring tide.

"A huge and beautiful species of *Alcyonium* (a soft coral called 'dead-man's toes') grew where it was left exposed at low water.

In this state its substance shrank up under the sun, and became of a pale brown or sponge-colour; but when its *animals* were expanded under water, this lobed fleshy mass was thickly spangled with golden stars, and looked very lovely. Several naked Mollusca, of gay colours and beautiful forms, glided among the corals; but I could only do them homage and release them again.

"There were, besides, countless soft creatures allied to sea-anemones—in fact quite an *anemonic* paradise. I found but few shells, and these for the most part rough and common."—*Mem. of Dr. Harvey*, p. 298.

### *North-Atlantic Dredging-expedition.*

The Royal Society has applied to the Admiralty for the use of a steamer in order to continue the investigations so ably commenced by Dr. Carpenter and Prof. Wyville Thomson; and the 'Porcupine' has been placed at their disposal. The expedition will take place about the middle of May; and the deep water, from 1100 to 1300 fathoms, near the Rockall Bank will be first explored, and afterwards the sea-bottom lying off the outer Hebrides and the Shetland Isles. Mr. Gwyn Jeffreys will take charge of the expedition for the first period of a month or six weeks, Prof. Wyville Thomson for the second period, and Dr. Carpenter for the last.

### *Land-Leeches of Ceylon.* By Dr. Harvey.

"We ascended a steep mountain-pass through dense jungle (near Paragulla in Ceylon), where were plenty of land-leeches; and as I stopped to pick some off my gaiters I said, 'Well they are not much trouble after all,' when, looking at my wrist, there was a great leech sucking his fill; this was the only bite I got. I must admit these leeches are annoying; you cannot stand a moment on the grass without seeing a troop of them coming towards you from every side; fast they come, and are soon up your legs if you are without gaiters; and they are always hungry. The naked legs and feet of our coolies were streaming with blood. They abound everywhere in the grass and dead leaves; nor can you when walking in the garden leave the gravel without being attacked."—*Memoir of Dr. Harvey*, p. 258.

### *The Loaf Starfish* (Culcita).

"At Tonga I met with a very remarkable Starfish, of the pentagonal form (*Culcita*), as large and as thick as a four-pound loaf of bread; but it has greatly shrunk in the drying, and is now quite flat, and only an inch in thickness. Three others I have cut open and skinned, and have their skins and skeletons. In the stomach of each was a fish some inches long. How such a sluggard could persuade a lively and sensible fish to walk into his stomach is to me a mystery."—*Mem. of Dr. Harvey*, p. 308.